

SEQUENCE LISTING

<110> Centro de Ingeniería Genética y Biotecnología
 5 <120> Artificial promoter for the expression of DNA sequences in plant
 cells
 <130> Artificial promoter
 10 <140> 0000
 <141> 2002-11-18
 <160> 22
 15 <170> PatentIn Ver. 2.1
 <210> 1
 <211> 86
 <212> DNA
 20 <213> Artificial sequence
 <220>
 <223> Artificial sequence description:
 Translational enhancer Eureka.
 25 <400> 1
 gaaacaaaatt gaacatcatt ctataataac aacacaaaaca caacacaact caatcattta 60
 tttgacaaca caactaaaca accatg 86
 30 <210> 2
 <211> 198
 <212> DNA
 <213>
 35 <220>
 <223> Artificial sequence description:
 Synthetic fragment P35AcU.
 40 <400> 2
 gaattctata tataggaaat tcatttcatt tggagccccc caacccttacc accaccacca 60
 ccaccaccc tccttcaca caacacacac acaacagatc tccccatcc tccctccgt 120
 cgccgcgcgc aacaccttgt aagatggctg tgcgctcaga tatatatagt gatatgcact 180
 acaaagatca taactagt 198
 45 <210> 3
 <211> 231
 <212> DNA
 <213>
 <220>
 <223> Artificial sequence description:
 Synthetic fragment I-U/Ac.
 55 <400> 3
 ctagaccggcc gcctcccccc cccccctctt ctaccccttc tctttcttcc tccgtttttt 60
 ttttccgtct cgtctcgatc tttggccttg gtatgttggg ggcgagaggc ggcttcgtcg 120
 cccaagatcg tgcgcgtttt ttatgttggaa ggggcgggat ctgcggctg ggtctcggcg 180
 tgcggccggaa ttctcgccggaa gaatggggct ctccggatgtg gatccgagct c 231

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5      <210> 4
      <211> 255
      <212> DNA
      <213> Artificial sequence

10     <220>
      <223> Artificial sequence description:
              Synthetic fragment I-Ac/U.

      <400> 4
      gatctgatcc gccgttgg  ggggagatat ggggcgttta aaatttcgcc atgctaaaca 60
      agatcaggaa gagggggaaaa gggcaactatg gtttaatttt tatatatttc tgctgctgct 120
15      cgtcaggatt agatgtgctt gatctttctt tcttctttt gtgggttagaa ttgaatccc 180
      tcagcattgt tcatcggtag ttttctttt gtcgatgctc accctgttgt ttgggttttt 240
      tatactagtg agctc                                255

20     <210> 5
      <211> 93
      <212> DNA
      <213> Artificial sequence

25     <220>
      <223> Artificial sequence Description:
              Synthetic fragment Init.

      <400> 5
      ctagtggcta tcctgacacg gtctctttgt caaatatctc tgtgtgcagg tataactgca 60
      ggaaacaaca acaataacca tggcttagag ctc                                93

35     <210> 6
      <211> 692
      <212> DNA
      <213>

      <220>
40     <223> Artificial sequence description:
              Artificial Exon/Intron/Exon ART.

      <400> 6
      accaccacca ccaccacacc ctcctccttc acacaacacaca cacacaacag atctccccca 60
      tcctccctcc cgtcgcgcgg cgcaacaccc ggttaagatgg ctgtgcgtc agatatatat 120
      agtgatatgc actacaaaaga tcataactag accgcccgcct cccccccccc ccctctctac 180
      ctctctctt tctttctccg tttttttttt cctgtctcg tcgatctttg gccttggtag 240
      tttggggggcg agaggcggct tcgtcgccca gatcggtgcg cgtttttta ttggagggg 300
      cgggatctcg cggctgggtc tcggcgtgcg gccggattct cgccggaaat ggggctctcg 360
      gatgtggate tgatccgcgg ttgttggggg agatatgggg cgttttaaat ttcgcctatgc 420
      taaaacaagat caggaagagg ggaaaagggc actatggtt aatttttata tatttctgct 480
      gctgctcgtc aggattagat gtgcgtgc tttctttttt cttttgtgg gttagaattt 540
      aatccctcag cattgttcat cggtagttt tctttgtgcg atgctcaccc ttttttttttttttgg 600
      tgttttata ctatggcta tcctgacacg gtctctttgt caaatatctc tgtgtgcagg 660
      tataactgca ggaaacaaca acaataacca tg                                692

55     <210> 7
      <211> 750
      <212> DNA
      <213>

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<220>
<223> Artificial sequence description:
      pPBS-ART vector sequence between the restriction sites EcoRI and
5   SacI.

<400> 7
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ccaccacctc ctccttcaca caacacacac acaacagatc tcccccatcc tccctcccg 120
10  cgccgcgcgc aacacctggt aagatggctg tgcgtcaga tatatatatgt gatatgcact 180
      acaaagatca taactagacc gccgcctccc cccccccccc tctctaccc ttcttttct 240
      ttctccgttt ttttttccg tctcgctcg atctttggcc ttgttagttt gggggcgaga 300
      ggccgcgtcg tcgcccagat cggtgcgcgt ttttttattt ggaggggcggg gatctgcgg 360
      ctgggtctcg gcgtgcggcc ggattctcgc gggaaatggg gctctcgat gtggatctga 420
15  tccgcgcgtt tgggggaga tatggggcgt taaaatttc gccatgctaa acaagatcag 480
      gaagagggga aaagggcact atggttaat ttttatataat ttctgctgct gctcgtcagg 540
      attagatgtg cttgatctt cttctttct tttgtggta gaatttgaat ccctcagcat 600
      ttttcatcgg tagttttct tttgtcgatg ctcaccctgt tttttgggtt ttttatacta 660
      gtggctatcc tgacacggtc tctttgtcaa atatctctgt gtgcaggtat aactgcagga 720
      aacaacaaca ataaccatgg tctagagctc 750

<210> 8
<211> 757
<212> DNA
<213> Artificial sequence

<220>
<223> Artificial sequence description:
      Artificial Exon/Intron/Exon ARTE.

<400> 8
accaccacca ccaccaccac ctcctccttc acacaacaca cacacaacag atctcccca 60
35  tcctccctcc cgtcgcgcgc cgcaacacct ggtaagatgg ctgtgcgtc agatataat 120
      agtgatatgc actacaaaga tcataactag accgcccgcct cccccccccc ccctctctac 180
      ctctctctt tctttctccg tttttttt ccgtctcgat tcgatcttg gccttggtag 240
      tttgggggat agaggcggct tcgtgcggca gatcggtgcg cgttttttt tttggagggg 300
      cggatctcg cggctgggtc tcggcgtgcg gccggattct cgccggaaat ggggctctcg 360
      gatgtggatc tgatccggc ttgttggggg agatatgggg cgttttttt ttgcggatgc 420
      taaacaagat caggaagagg ggaaaaggc actatggtt aattttata tatttctgt 480
      gctgctcgat aggattagat gtgcttgcatttttttctt cttttgtgg gtagaatttg 540
      aatccctcag cattgttcat cggtagttt tctttgtcg atgctcaccc ttttttttttgg 600
      ttttttata ctatgtgcata tcctgacacg gtctctttgt caaatatctc ttttttttttgg 660
      tataactgca ggaaacaaat tgaacatcat tctatcaata caacacaaac acaacacaaac 720
      tcaatcattt atttgacaac acaactaaac aaccatgg 757

<210> 9
<211> 815
<212> DNA
<213> Artificial sequence

<220>
<223> Artificial sequence description:
      pPARTE vector sequence between the restriction sites EcoRI and
55   SacI.

<400> 9
gaattctata tataggaagt tcatttcatt tggagccccca aacccttacc accaccacca 60
ccaccacctc ctccttcaca caacacacac acaacagatc tcccccatcc tccctcccg 120
60

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cgccgcgc aacacctgg aagatggctg tgcgctaga tatataatgt gatatgcact 180
 acaaagatca taactagacc gccgcctccc ccccccccc tctctacctt ctctttct 240
 ttctccgtt tttttccg tctcgctcg atcttgcc ttggtagttt gggggcgaga 300
 5 ggccgcgtcg tcgcccagat cggtgcgcgt tttttattt ggaggggcgg gatctgcgg 360
 ctgggtctcg gcgtgcggcc ggattctcgc gggaaatgg gctctcgat gtggatctga 420
 tccgcgtt ttgggggaga tatggggcgt taaaatttc gccatgctaa acaagatcag 480
 gaagagggga aaagggcact atgggttaat ttttatatat ttctgctgct gctcgtcagg 540
 attagatgtg cttgatctt ctttcttctt tttgtgggtt gaatttgaat ccctcagcat 600
 10 tgttcatcg tagttttct tttgtcgatg ctcaccctgt tgtttgtgt ttttatacta 660
 gtggctatcc tgacacggc tctttgtcaa atatctctgt gtgcaggtat aactgcagga 720
 aacaattga acatcattct atcaatacaa cacaaacaca acacaactca atcatttattt 780
 tgacaacaca actaaacaac catggtctag agtc 815

15 <210> 10
 <211> 184
 <212> DNA
 <213> Artificial sequence

20 <220>
 <223> Artificial sequence description:
 Synthetic fragment En-Acl.

<400> 10
 25 atcaccgtga gttgtccgca ccaccgcacg tctcgagcc aaaaaaaaaa aaagaaagaa 60
 aaaaaaagaaa aagaaaaaac agcaggtggg tccgggtcgt gggggccgga aaagcgagga 120
 ggatcgcgag cagcgacgag gccggccctc cctccgctc caaagaaacg ccccccattca 180
 attc 184

30 <210> 11
 <211> 94
 <212> DNA
 <213> Artificial sequence

35 <220>
 <223> Artificial sequence description:
 Synthetic fragment En-Ac2.

40 <400> 11
 aagcttgata tccatagcaa gcccagccca acccaaccca acccaaccca ccccaagtgc 60
 gccaactggc aaatagtctc cacaccccg cact 94

45 <210> 12
 <211> 1087
 <212> DNA
 <213> Artificial sequence

50 <220>
 <223> Artificial sequence description:
 pAPARTE vector sequence between the restriction sites HindIII y SacI.

55 <400> 12
 aagcttgata tccatagcaa gcccagccca acccaaccca acccaaccca ccccaagtgc 60
 gccaactggc aaatagtctc cacaccccg cactatcacc gtgagttgtc cgaccaccc 120
 cacgtctcgc agccaaaaaa aaaaaaagaa agaaaaaaa gaaaaagaaa aaacagcagg 180
 tgggtccggg tcgtggggc cgaaaaagcg aggaggatcg cgagcagcga cgaggccggc 240
 60 cctccctccg cttccaaaga aaccccccc atcaattcta tatataggaa gttcatttca 300
 tttggagccc cccaaacccttta ccaccaccac caccaccacc tcctcattca cacaacacac 360

acacaacaga tctcccccat cctccctccc gtcgcgccg gcaacacctg gtaagatggc 420
 tgtgcgtca gatatataa gtgatatgca ctacaaagat cataactaga ccggccgcctc 480
 cccccccccc cctcttacc ttctctttt cttctccgt ttttttttc cgtctcgct 540
 5 cgatctttgg ccttggtagt ttggggcga gagggggctt cgtcgcccag atcggtgcgc 600
 gttttttat ttggaggggc gggatctcg ggtctgggtct cggcgtgcgg ccggatttctc 660
 gcgggaaatg gggctctcg atgtggatct gatccgcccgt tggtggggaa gatatggggc 720
 gttttaaaatt tcgcccgt aaacaagatc aggaagaggg gaaaaggggca ctatggttt 780
 atttttatat atttctgtcg ctgctcgta ggatttagatg tgcttgatct ttctttcttc 840
 10 ttttgtggg tagaatttga atccctcagc attgttcatc ggttagtttt cttttgtcga 900
 tgctcacccct gttgtttgtt gttttatac tagtggctat cctgacacgg tctctttgtc 960
 aaatatctct gtgtgcaggt ataactgcag gaaacaaattt gaacatcattt ctatcaatac 1020
 aacacaaaca caacacaactt caatcattta ttgtacaaca caactaaaca accatggtct 1080
 agagctc 1087

15 <210> 13
 <211> 31
 <212> ADN
 <213> Artificial sequence

20 <220>
 <223> Artificial sequence description:
 Synthetic fragment ASP.

25 <400> 13
 gtcgactgac gcttcgaatg acgcacatgc c 31

30 <210> 14
 <211> 1065
 <212> DNA
 <213> Artificial sequence

<220>
 35 <223> Artificial sequence description:
 p2A1PARTE vector between the restriction sites KpnI and SacI.

<400> 14
 ggtaccgggc cccccctcga ctgacgcttc gaatgacgca catgccatca ccgtgagttg 60
 40 tccgcaccac cgacacgttcc gcagccaaaa aaaaaaaaaaag aaagaaaaaa aagaaaaaaga 120
 aaaaacagca ggtgggtccg ggtcggtggg gccggaaaaag cgaggaggat cgctgacgct 180
 tcgaatgacg cacatgccc agcagcgcacg aggccggccc tccctccgt tccaaagaaa 240
 ccccccccat caattctata tataggaagt tcatttcatt tggagccccca aacccttacc 300
 accaccacca ccaccaccc tccttcaca caacacacac acaacagatc tcccccatcc 360
 45 tccctccgt cgccgcgc aacacctggt aagatggctg tgcgctcaga tatataatag 420
 gatatgcact acaaagatca taactagacc gcccctccc cccccccccc tctctacctt 480
 ctctctttct ttctccgtt ttttttccg ttcgtctcg atcttggcc ttggtagttt 540
 gggggcaga ggcggcttcg tcgcccagat cggtgccgt ttttttattt ggaggggcgg 600
 gatctcgccg ctgggtctcg gcgtgcggcc ggattctcg ggggaatggg gctctcgat 660
 50 gtggatctga tccgcgttg ttggggaga tatggggcgt taaaatttc gccatgctaa 720
 acaagatcag gaagagggga aaagggcact atggttaat ttttatataat ttctgctgt 780
 gctcgctcagg attagatgtt ctgtatctt ctttcttctt ttgtgggtt gaatttgaat 840
 ccctcagcat tgttcatcgg tagttttctt ttgtcgatg ctcaccctgt tgtttgggt 900
 ttttatacta gtggctatcc tgacacggc tcttgcataa atatctctgt gtgcaggtat 960
 55 aactgcagga aacaaatttga acatcattct atcaataacaa cacaacaca acacaactca 1020
 atcattttt tgacaacaca actaaacaac catggtctag agctc 1065

60 <210> 15
 <211> 1135
 <212> DNA

5 <213> Artificial sequence
 <220>
 <223> Artificial sequence description:
 p2APARTE vector sequence between the restriction sites SalI and
 SacI.
 10 <400> 15
 gtcgactgac gcttcgaatg acgcacatgc catccatagc aagcccagcc caacccaacc 60
 caacccaacc caccggcagg cagccaaactg gcaaataatgc tccacaccccc ggcactatca 120
 ccgtgagttg tccgcaccac cgacgtctc gcagccaaaa aaaaaaaaaaag aaagaaaaaaa 180
 aagaaaaaaa aaaaacagca ggtgggtccg ggtcggtggg gccggaaaag cgaggaggat 240
 cgctgacgct tcgaatgacg cacatgcccc agcagcgaacg aggccggccc tccctccgct 300
 tccaaagaaa cggcccccatt caatctata tataggaagt tcatttcatt tggagcccccc 360
 15 caaccctacc accaccacca ccaccaccc tccttcaca caacacacac acaacagatc 420
 tcccccatcc tccctcccg cgcgcgcgc aacaccttgt aagatggctg tgcgctcaga 480
 tatatatagt gatatgcact acaaagatca taacttagacc gccgcctccc ccccccccccc 540
 tctctacctt ctctctttt ttctccgtt ttttttccg tctcgctcg atctttggcc 600
 ttggtagttt gggggcgaga ggcggcttcg tcgcccagat cggtgccgat ttttttattt 660
 20 ggaggggcgg gatctcgccg ctgggtctcg gcgtgcggcc ggatttcgc gggaatggg 720
 gctctcgat gtggatctga tccggccgtt ttgggggaga tatggggcgt ttaaaatttc 780
 gccatgtcaa acaagatcag gaagggggga aaagggcact atggttaat ttttatataat 840
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 gaatttgaat ccctcagcat tgttcatcgg tagttttctt tttgtcgatg ctcaccctgt 960
 25 tgtttgggtgt ttttatacta gtggctatcc tgacacggc tctttgtcaa atatctctgt 1020
 gtgcaggat aactgcagga aacaattga acatcattt atcaatacaa cacaacacaca 1080
 acacaactca atcattttt tgacaacaca actaaacaac catggtctag agctc 1135
 30 <210> 16
 <211> 31
 <212> DNA
 <213> Artificial sequence
 35 <220>
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 40 <400> 16
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 45 <210> 17
 <211> 27
 <212> DNA
 <213> Artificial sequence
 50 <220>
 <223> Artificial sequence description:
 Oligonucleotidic primer Oli-U2.
 55 <400> 17
 ctcctcgagg gcgtttaaca ggctggc 27
 60 <210> 18
 <211> 186
 <212> DNA
 <213> Artificial sequence
 <220>

atggctgtgc gctcagat atatagtat atgcactaca aagatcataa ctagaccgcc 1080
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 cgatcgatc ttggccctt gtagttggg ggcgagagc ggcttcgtcg cccagatcg 1200
 tgcgcgttt ttatatttggaa gggccggat ctcgcggctg ggtctcggcg tgcggccgga 1260
 5 ttctcgccgg gaatggggct ctcggatgtg gatctgatcc ggcgttggg ggggagat 1320
 ggggcgttta aaatttcggc atgctaaaca agatcaggaa gagggggaaa gggcactatg 1380
 gttaatttt tatataatttc tgctgctgct cgtcaggatt agatgtgctt gatcttctt 1440
 tcttctttt gtgggttagaa tttgaatccc tcagcattgt tcacgtttag tttttctttt 1500
 10 gtcgatgctc accctgttgtt ttgggtttt tatactatgt gctatcctga cacggctctc 1560
 ttgtcaaata tctctgtgtg caggataac tgcagggaaac aaattgaaca tcattctatc 1620
 aatacaacac aaacacaaca caactcaatc atttatttga caacacaact aaacaaccat 1680
 ggtctagagc tc 1692

15 <210> 21
 <211> 223
 <212> DNA
 <213> Artificial sequence

20 <220>
 <223> Artificial sequence description:
 Synthetic fragment GLU.

<400> 21
 25 ctcgagatac atattaagag tatggacaga catttcttta acaaactcca tttgtattac 60
 tccaaaagca ccagaagttt gtcatggctg agtcatgaaa tgtatagttc aatcttgcaa 120
 agttgcctt cctttgtac tgtgttttaa cactacaagc catatattgt ctgtacgtgc 180
 aacaaactat atcaccatgt atcccaagat gcttttttaa ttc 223

30 <210> 22
 <211> 1032
 <212> DNA
 <213> Artificial sequence

35 <220>
 <223> Artificial sequence description:
 pGARTE vector sequence between the restriction sites XhoI and SacI.

40 <400> 22
 ctcgagatac atattaagag tatggacaga catttcttta acaaactcca tttgtattac 60
 tccaaaagca ccagaagttt gtcatggctg agtcatgaaa tgtatagttc aatcttgcaa 120
 agttgcctt cctttgtac tgtgttttaa cactacaagc catatattgt ctgtacgtgc 180
 aacaaactat atcaccatgt atcccaagat gcttttttaa ttcttatatat aggaagttca 240
 45 tttcatttgg agccccccaa ccctaccacc accaccacca ccacccctc cttcacacaa 300
 cacacacaca acagatctcc cccatccctcc ctccccgtcgc gccgcgcaac acctggtaag 360
 atggctgtgc gctcagat atatagtat atgcactaca aagatcataa ctagaccgcc 420
 gcctcccccc ccccccctct ctaccccttc tctttcttc tccgaaaaaa tttccgtct 480
 cgtctcgatc ttggccctt gtagttggg ggcgagagc ggcttcgtcg cccagatcg 540
 tgcgcgttt ttatatttggaa gggccggat ctcgcggctg ggtctcggcg tgcggccgga 600
 ttctcgccgg gaatggggct ctcggatgtg gatctgatcc ggcgttggg ggggagat 660
 ggggcgttta aaatttcggc atgctaaaca agatcaggaa gagggggaaa gggcactatg 720
 gttaatttt tatataatttc tgctgctgct cgtcaggatt agatgtgctt gatcttctt 780
 tcttctttt gtgggttagaa tttgaatccc tcagcattgt tcacgtttag tttttctttt 840
 55 gtcgatgctc accctgttgtt ttgggtttt tatactatgt gctatcctga cacggctctc 900
 ttgtcaaata tctctgtgtg caggataac tgcagggaaac aaattgaaca tcattctatc 960
 aatacaacac aaacacaaca caactcaatc atttatttga caacacaact aaacaaccat 1020
 ggtctagagc tc 1032